

The diagram illustrates a genetic screening strategy to identify essential genes in *E. coli*. It shows a sequence of steps: 1. Starting with *E. coli* cells containing *E. coli* DNA. 2. Introduction of a temperature-sensitive (ts) BAC, creating a merodiploid state. 3. Incubation at 30°C. 4. Introduction of a Tn 5 transposon into an essential gene within the BAC's homology region. 5. Incubation at 43°C, which leads to the loss of the ts-BAC. 6. Cell death, indicating that the gene disrupted by the transposon is essential for growth at the higher temperature.

Fig.1. Diagram of the introduction and the elimination of Tn5 transposon and BACts in *E. coli*.

The diagram illustrates the In Vitro Tn5 Transposon system. It starts with a BAC (Bacterial Artificial Chromosome) and an In Vitro Tn5 Transposon. These are combined to form a BAC-Tn5 complex. This complex is then used for Transformation into a cell, resulting in a large BAC and a small Tn5 transposon.

FIG. 2

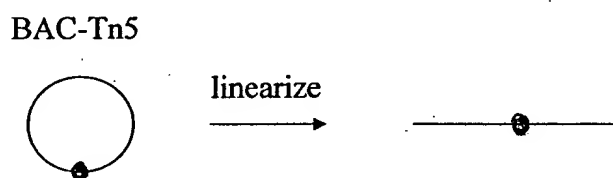


FIG. 3

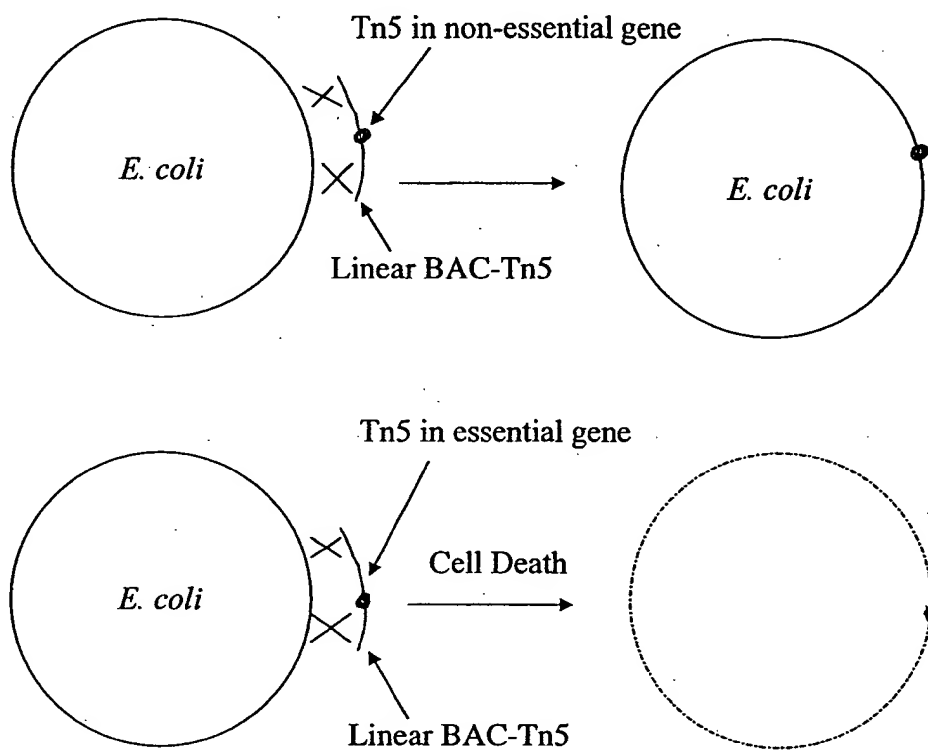


Fig. 4.

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